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Occupational Employment and Wages in Boston-Cambridge-Quincy — May 2014

Workers in the Boston-Cambridge-Quincy Metropolitan Statistical Area had an average (mean) hourly wage of \$30.77 in May 2014, about 35 percent above the nationwide average of \$22.71, according to the U.S. Bureau of Labor Statistics. Regional Commissioner Deborah A. Brown noted that, after testing for statistical significance, wages in the local area were higher than their respective national averages in all of the 22 major occupational groups.

When compared to the nationwide distribution, local employment was more highly concentrated in 9 of the 22 occupational groups, including management; business and financial operations; and computer and mathematical. Conversely, eight groups had employment shares significantly below their national representation, including production; transportation and material moving; and installation, maintenance, and repair. (See [table A](#) and [box note](#) at end of release.)

Table A. Occupational employment and wages by major occupational group, United States and the Boston-Cambridge-Quincy Metropolitan Statistical Area, and measures of statistical significance, May 2014

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Boston	United States	Boston	Percent difference ⁽¹⁾
Total, all occupations.....	100.0%	100.0%	\$22.71	\$30.77*	35
Management.....	5.0	8.2*	54.08	63.73*	18
Business and Financial Operations.....	5.1	7.7*	34.81	40.95*	18
Computer and Mathematical.....	2.8	5.4*	40.37	46.64*	16
Architecture and Engineering.....	1.8	2.4*	39.19	43.01*	10
Life, Physical, and Social Science.....	0.8	2.0*	33.69	38.48*	14
Community and Social Services.....	1.4	1.9*	21.79	23.79*	9
Legal.....	0.8	1.0*	48.61	60.79*	25
Education, Training, and Library.....	6.2	6.1	25.10	33.60*	34
Arts, Design, Entertainment, Sports, and Media.....	1.3	1.8*	26.82	29.94*	12
Healthcare Practitioner and Technical.....	5.8	7.2*	36.54	42.86*	17
Healthcare Support.....	2.9	2.9	13.86	16.68*	20
Protective Service.....	2.4	2.5	21.14	24.36*	15
Food Preparation and Serving Related.....	9.1	8.2*	10.57	12.67*	20
Building and Grounds Cleaning and Maintenance.....	3.2	3.2	12.68	16.19*	28
Personal Care and Service.....	3.1	3.0	12.01	14.68*	22
Sales and Related.....	10.5	9.3*	18.59	25.06*	35
Office and Administrative Support.....	16.0	14.6*	17.08	21.08*	23
Farming, Fishing, and Forestry.....	0.3	(2) *	12.09	14.73*	22
Construction and Extraction.....	3.9	2.7*	22.40	30.43*	36

Table A. Occupational employment and wages by major occupational group, United States and the Boston-Cambridge-Quincy Metropolitan Statistical Area, and measures of statistical significance, May 2014 - Continued

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Boston	United States	Boston	Percent difference ⁽¹⁾
Installation, Maintenance, and Repair.....	3.9	2.4*	21.74	26.30*	21
Production.....	6.6	3.5*	17.06	19.64*	15
Transportation and Material Moving.....	6.8	4.0*	16.57	18.14*	9

⁽¹⁾ A positive percent difference measures how much the mean wage in Boston is above the national mean wage, while a negative difference reflects a lower wage.

⁽²⁾ Indicates a value of less than 0.05 percent

* The percent share of employment or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group—computer and mathematical—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Boston-Cambridge-Quincy had 96,190 jobs in computer and mathematical, accounting for 5.4 percent of local area employment, significantly higher than the 2.8-percent share nationally. The average hourly wage for this occupational group locally was \$46.64, significantly above the national wage of \$40.37.

Some of the largest detailed occupations within the computer and mathematical group included software developers, applications (20,690), systems software developers (18,600), and computer systems analysts (11,620). Among the higher paying jobs were computer network architects and software developers, systems software, with mean hourly wages of \$56.68 and \$55.90, respectively. At the lower end of the wage scale were computer user support specialists (\$31.18) and operations research analysts (\$36.87). (Detailed occupational data for computer and mathematical are presented in [table 1](#); for a complete listing of detailed occupations available go to www.bls.gov/oes/2014/may/oes_71654.htm.)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See [table 1](#).) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally. In the Boston-Cambridge-Quincy Metropolitan Statistical Area, above-average concentrations of employment were found in many of the occupations within the computer and mathematical group. For instance, systems software developers were employed at 3.7 times the national rate in Boston, and applications software developers at 2.3 times the U.S. average. On the other hand, network and computer systems administrators had a location quotient of 1.3 in Boston, indicating that this particular occupation's local and national employment shares were similar.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Massachusetts Division of Unemployment Assistance.

Note

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

Technical Note

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. Guam, Puerto Rico, and the Virgin Islands are also surveyed, but their data are not included in the national estimates. OES estimates are constructed from a sample of about 1.2 million establishments. Forms are mailed to approximately 200,000 sampled establishments in May and November each year. May 2014 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2014, November 2013, May 2013, November 2012, May 2012, and November 2011. The overall national response rate for the six panels is 74.3 percent based on establishments and 70.5 percent based on weighted sampled employment. The unweighted employment of sampled establishments across all six semiannual panels represents approximately 57.1 percent of total national employment. (Response rates are slightly lower for these estimates due to the federal shutdown in October 2013.) The sample in the Boston-Cambridge-Quincy Metropolitan Statistical Area included 7,656 establishments with a response rate of 74 percent. For more information about OES concepts and methodology, go to www.bls.gov/news.release/ocwage.tn.htm.

The OES survey provides estimates of employment and hourly and annual wages for wage and salary workers in 22 major occupational groups and 821 detailed occupations for the nation, states, metropolitan statistical areas, metropolitan divisions, and nonmetropolitan areas. In addition, employment and wage estimates for 94 minor groups and 458 broad occupations are available in the national data. OES data by state and metropolitan/nonmetropolitan area are available from www.bls.gov/oes/current/oesrest.htm and www.bls.gov/oes/current/oesrcma.htm, respectively.

The May 2014 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at www.bls.gov/soc and information about the 2012 NAICS is available at www.bls.gov/bls/naics.htm.

Area definitions

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Boston-Cambridge-Quincy, Mass. Metropolitan Statistical Area** includes Acton town, Andover town, Arlington town, Ayer town, Bedford town, Belmont town, Beverly city, Bolton town, Boston city, Boxborough town, Boxford town, Braintree town, Brookline town, Burlington town, Cambridge city, Canton town, Carlisle town, Carver town, Chelsea city, Cohasset town, Concord town, Dedham town, Dover town,

Duxbury town, Essex town, Everett city, Foxborough town, Franklin city, Gloucester city, Groton town, Hamilton town, Hanover town, Harvard town, Hingham town, Holbrook town, Hull town, Ipswich town, Kingston town, Lexington town, Lincoln town, Littleton town, Lynnfield town, Malden city, Manchester by the Sea town, Mansfield town, Marshfield town, Maynard town, Medfield town, Medford city, Medway town, Melrose city, Middleton town, Millis town, Milton town, Needham town, Newbury town, Newburyport city, Newton city, Norfolk town, North Reading town, Norwell town, Norwood town, Pembroke town, Plymouth town, Quincy city, Randolph town, Reading town, Revere city, Rockland town, Rockport town, Rowley town, Saugus town, Scituate town, Sharon town, Sherborn town, Shirley town, Somerville city, and Stoneham town, Stoughton town, Stow town, Sudbury town, Topsfield town, Wakefield town, Walpole town, Waltham city, Watertown city, Wayland town, Wellesley town, Wenham town, Weston town, Westwood town, Weymouth town, Wilmington town, Winchester town, Winthrop town, Woburn city, and Wrentham town, MA.

Additional information

OES data are available on our regional web page at www.bls.gov/regions/new-england. Answers to frequently asked questions about the OES data are available at www.bls.gov/oes/oes_ques.htm. Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at www.bls.gov/oes/2014/may/methods_statement.pdf.

Information in this release will be made available to sensory impaired individuals upon request . Voice phone: 202-691-5200; Federal Relay Service: 800-877-8339.

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Boston-Cambridge-Quincy Metropolitan Statistical Area, May 2014

Occupation ⁽¹⁾	Employment		Mean wages	
	Level ⁽²⁾	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Computer and Mathematical Occupations.....	96,190	1.9	\$46.64	\$97,020
Computer and Information Research Scientists.....	670	2.1	52.04	108,250
Computer Systems Analysts.....	11,620	1.7	42.53	88,460
Information Security Analysts.....	2,050	1.9	43.12	89,690
Computer Programmers.....	5,830	1.5	42.97	89,370
Software Developers, Applications.....	20,690	2.3	54.15	112,630
Software Developers, Systems Software.....	18,600	3.7	55.90	116,270
Web Developers.....	2,790	1.7	38.05	79,140
Database Administrators.....	2,720	1.8	40.45	84,140
Network and Computer Systems Administrators.....	6,460	1.3	41.91	87,170
Computer Network Architects.....	3,300	1.8	56.68	117,900
Computer User Support Specialists.....	10,770	1.4	31.18	64,850
Computer Network Support Specialists.....	2,210	1.0	40.42	84,070
Computer Occupations, All Other.....	3,410	1.2	44.63	92,820
Actuaries.....	750	2.6	53.11	110,460
Operations Research Analysts.....	2,440	2.1	36.87	76,700
Statisticians.....	1,780	5.0	41.18	85,660

⁽¹⁾ For a complete listing of all detailed occupations in Boston-Cambridge-Quincy, MA NECTA Division, see www.bls.gov/oes/current/oes_71654.htm.

⁽²⁾ Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

⁽³⁾ The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

⁽⁴⁾ Annual wages have been calculated by multiplying the hourly mean wage by a 'year-round, full-time' hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.